

## CLAIMS

- [c1] 1. A method in a switch for avoiding a deadlock while a connection is being established through the switch, the method comprising:  
receiving data at a port, the data indicating that the port is to be part of a conflicting connection established through the switch; and  
when the port is already part of a current connection that is being established,  
when the current connection has a higher priority than the conflicting connection, maintaining the current connection; and  
when the current connection does not have a higher priority than the conflicting connection, establishing part of the conflicting connection through the port.
- [c2] 2. The method of claim 1 wherein the priority of a connection is based on priority of data to be transmitted through the connection.
- [c3] 3. The method of claim 1 wherein when the current connection has the same priority as the conflicting connection, using an identifier of the switch and a device that sent the data as a priority tiebreaker.
- [c4] 4. The method of claim 1 wherein the establishing of part of the conflicting connection through the port includes sending data through the partially built current connection indicating that the current connection cannot be established.

[c5] 5. The method of claim 1 wherein the establishing of the conflicting connection includes attempting to establish the current connection through another port of the switch.

[c6] 6. The method of claim 1 wherein the data is a start-of-connection frame.

[c7] 7. The method of claim 1 wherein the switch is Fibre Channel compatible.

[c8] 8. The method of claim 1 wherein the switch is InfiniBand compatible.

[c9] 9. A device comprising:  
a component that establishes an existing connection through a port;  
a component that receives a communication at the port, the communication indicating that the port is to be part of a conflicting connection established through the device; and  
a component that maintains the existing connection when the existing connection has a higher priority than the conflicting connection and that terminates the existing connection when the conflicting connection has a higher priority than the existing connection.

[c10] 10. The device of claim 9 wherein the priority of a connection is based on priority of the communication to be transmitted through the connection.

[c11] 11. The device of claim 9 wherein when the existing connection has the same priority as the conflicting connection, an identifier of the device and another device that sent the communication is used as a priority tiebreaker.

[c12] 12. The device of claim 9 including a component that sends a communication through the existing connection indicating that the existing connection cannot be established.

[c13] 13. The device of claim 9 including a component that attempts to establish the existing connection through another port of the device when the conflicting connection has a higher priority.

[c14] 14. The device of claim 9 wherein the communication is a start-of-connection frame.

[c15] 15. The device of claim 9 wherein the device is Fibre Channel compatible.

[c16] 16. The device of claim 9 wherein the device is InfiniBand compatible.

[c17] 17. The device of claim 9 wherein the device is a routing device.

[c18] 18. The device of claim 9 wherein the device is a switch.

[c19] 19. The device of claim 9 wherein the device is a node.

[c20] 20. A method in a routing device for avoiding a deadlock while a connection is being established through the routing device, the method comprising:

receiving a communication at the routing device, the communication indicating that the port is to be part of a new connection to be established through the routing device; and

when the routing device is already part of a current connection that is being established, terminating the current connection and establishing part of the new connection through the routing device.

[c21] 21. The method of claim 20 wherein the current connection is terminated and the new connection is established when the new connection has a higher priority.

[c22] 22. The method of claim 21 wherein the priority of a connection is based on priority of communications to be transmitted through the connection.

[c23] 23. The method of claim 21 wherein when the current connection has the same priority as the new connection, using an identifier of the routing device and an other device that sent the communication as a priority tiebreaker.

[c24] 24. The method of claim 20 wherein the establishing of part of the new connection includes sending communications through a partially built current connection indicating that the current connection cannot be established.

[c25] 25. The method of claim 20 wherein the establishing of the new connection includes attempting to establish the current connection through another port of the switch.

[c26] 26. The method of claim 20 wherein the communication is a start-of-connection frame.

[c27] 27. The method of claim 20 wherein the routing device is Fibre Channel compatible.

[c28] 28. The method of claim 20 wherein the routing device is InfiniBand compatible.

[c29] 29. The method of claim 20 wherein the routing device has ports and a conflict occurs when the current connection and the new connection are to use the same conflicting port.

[c30] 30. The method of claim 29 including selecting an equivalent port for the conflicting port and establishing the new connection through the selected equivalent port.

[c31] 31. The method of claim 20 wherein the routing device is an interconnect fabric module.

[c32] 32. A device comprising:  
means for receiving a communication at a port, that port having an existing connection that is partially built, the communication indicating that the port is to be part of a new connection;  
means for maintaining the existing connection when the existing connection has a higher priority than the new connection; and  
means for terminating the existing connection when the new connection has a higher priority than the existing connection.

[c33] 33. The device of claim 32 wherein the priority of a connection is based on priority of the communication to be transmitted through the connection.

[c34] 34. The device of claim 32 wherein when the existing connection has the same priority as the new connection, an identifier of the device and another device that sent the communication is used as a priority tiebreaker.

[c35] 35. The device of claim 32 including means for sending a communication through the existing connection indicating that the existing connection cannot be established.

[c36] 36. The device of claim 32 including means for attempting to establish the existing connection through another port of the device.

[c37] 37. The device of claim 32 wherein the communication is a start-of-connection frame.

[c38] 38. The device of claim 32 wherein the device is Fibre Channel compatible.

[c39] 39. The device of claim 32 wherein the device is InfiniBand compatible.

[c40] 40. The device of claim 32 wherein the device is a routing device.

[c41] 41. The device of claim 32 wherein the device is a switch.